

0550
0102

#7

OIPE

RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/09/915,515A

TIME: 15:10:06

Input Set : A:\seq.txt

Output Set: N:\CRF3\01042002\I915515A.raw

ENTERED

1 <110> APPLICANT: Taylor, Garry
 2 Portner, Allen
 3 Takimoto, Toru
 4 Babu, Y. Sudhakar
 5 Rowland, R. Scott
 7 <120> TITLE OF INVENTION: Three Dimensional Structure of Paramyxovirus Hemagglutinin-
 Neuraminidase
 8 and Uses Thereof
 10 <130> FILE REFERENCE: 1663/00142
 12 <140> CURRENT APPLICATION NUMBER: US/09/915,515A
 12 <141> CURRENT FILING DATE: 2001-12-18
 12 <160> NUMBER OF SEQ ID NOS: 1
 14 <210> SEQ ID NO: 1
 16 <211> LENGTH: 577
 18 <212> TYPE: PRT
 20 <213> ORGANISM: Newcastle Disease Virus (Kansas Strain)
 22 <400> SEQUENCE: 1

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26	Ala	Lys	Asn	Thr	trp	Arg	Leu	Ile	Phe	Arg	Ile	Ala	Ile	Leu	Leu	Leu
27				20					25					30		
29	Thr	Val	Val	Thr	Leu	Ala	Thr	Ser	Val	Ala	Ser	Leu	Val	Tyr	Ser	Met
30			35					40					45			
32	Gly	Ala	Ser	Thr	Pro	Ser	Asp	Leu	Val	Gly	Ile	Pro	Thr	Arg	Ile	Ser
33		50					55					60				
35	Arg	Ala	Glu	Glu	Lys	Ile	Thr	Ser	Ala	Leu	Gly	Ser	Asn	Gln	Asp	Val
36	65					70					75					80
38	Val	Asp	Arg	Ile	Tyr	Lys	Gln	Val	Ala	Leu	Glu	Ser	Pro	Leu	Ala	Leu
39					85					90					95	
41	Leu	Asn	Thr	Glu	Thr	Thr	Ile	Met	Asn	Ala	Ile	Thr	Ser	Leu	Ser	Tyr
42				100					105					110		
44	Gln	Ile	Asn	Gly	Ala	Ala	Asn	Asn	Ser	Gly	trp	Gly	Ala	Pro	Ile	His
45			115						120				125			
47	Asp	Pro	Asp	Phe	Ile	Gly	Gly	Ile	Gly	Lys	Glu	Leu	Ile	Val	Asp	Asn
48		130					135					140				
50	Ala	Ser	Asp	Val	Thr	Ser	Phe	Tyr	Pro	Ser	Ala	Phe	Gln	Glu	His	Leu
51	145					150					155					160
53	Asn	Phe	Ile	Pro	Ala	Pro	Thr	Thr	Gly	Ser	Gly	Cys	Thr	Arg	Ile	Pro
54				165						170					175	
56	Ser	Phe	Asp	Met	Ser	Ala	Thr	His	Tyr	Cys	Tyr	Thr	His	Asn	Val	Ile
57				180					185					190		
59	Leu	Ser	Gly	Cys	Arg	Asp	His	Ser	His	Ser	His	Gln	Tyr	Leu	Ala	Leu
60			195					200					205			
62	Gly	Val	Leu	Arg	Thr	Thr	Ala	Thr	Gly	Arg	Ile	Phe	Phe	Ser	Thr	Leu
63		210					215					220				
65	Arg	Ser	Ile	Ser	Leu	Asp	Asp	Thr	Gln	Asn	Arg	Lys	Ser	Cys	Ser	Val
66	225					230					235					240
68	Ser	Ala	Thr	Pro	Leu	Gly	Cys	Asp	Met	Leu	Cys	Ser	Lys	Val	Thr	Glu

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69					245					250					255		
71	Thr	Glu	Glu	Glu	Asp	Tyr	Asn	Ser	Ala	Val	Pro	Thr	Leu	Met	Ala	His	
72				260					265					270			
74	Gly	Arg	Leu	Gly	Phe	Asp	Gly	Gln	Tyr	His	Glu	Lys	Asp	Leu	Asp	Val	
75			275					280					285				
77	Thr	Thr	Leu	Phe	Glu	Asp	trp	Val	Ala	Asn	Tyr	Pro	Gly	Val	Gly	Gly	
78		290					295					300					
80	Gly	Ser	Phe	Ile	Asp	Gly	Arg	Val	trp	Phe	Ser	Val	Tyr	Gly	Gly	Leu	
81	305					310					315					320	
83	Lys	Pro	Asn	Ser	Pro	Ser	Asp	Thr	Val	Gln	Glu	Gly	Lys	Tyr	Val	Ile	
84					325					330					335		
86	Tyr	Lys	Arg	Tyr	Asn	Asp	Thr	Cys	Pro	Asp	Glu	Gln	Asp	Tyr	Gln	Ile	
87				340					345					350			
89	Arg	Met	Ala	Lys	Ser	Ser	Tyr	Lys	Pro	Gly	Arg	Phe	Gly	Gly	Lys	Arg	
90			355					360					365				
92	Ile	Gln	Gln	Ala	Ile	Leu	Ser	Ile	Lys	Val	Ser	Thr	Ser	Leu	Gly	Glu	
93		370					375					380					
95	Asp	Pro	Val	Leu	Thr	Val	Pro	Pro	Asn	Thr	Val	Thr	Leu	Met	Gly	Ala	
96	385					390				395						400	
98	Glu	Gly	Arg	Ile	Leu	Thr	Val	Gly	Thr	Ser	His	Phe	Leu	Tyr	Gln	Arg	
99				405					410						415		
101	Gly	Ser	Ser	Tyr	Phe	Ser	Pro	Ala	Leu	Leu	Tyr	Pro	Met	Thr	Val	Ser	
102				420					425				430				
104	Asn	Lys	Thr	Ala	Thr	Leu	His	Ser	Pro	Tyr	Thr	Phe	Asn	Ala	Phe	Thr	
105			435					440					445				
107	Arg	Pro	Gly	Ser	Ile	Pro	Cys	Gln	Ala	Ser	Ala	Arg	Cys	Pro	Asn	Ser	
108		450					455					460					
110	Cys	Val	Thr	Gly	Val	Tyr	Thr	Asp	Pro	Tyr	Pro	Leu	Ile	Phe	Tyr	Arg	
111	465					470				475					480		
113	Asn	His	Thr	Leu	Arg	Gly	Val	Phe	Gly	Thr	Met	Leu	Asp	Ser	Glu	Gln	
114				485					490						495		
116	Ala	Arg	Leu	Asn	Pro	Ala	Ser	Ala	Val	Phe	Asp	Ser	Thr	Ser	Arg	Ser	
117				500				505					510				
119	Arg	Ile	Thr	Arg	Val	Ser	Ser	Ser	Ser	Thr	Lys	Ala	Ala	Tyr	Thr	Thr	
120		515					520					525					
122	Ser	Thr	Cys	Phe	Lys	Val	Val	Lys	Thr	Asn	Lys	Thr	Tyr	Cys	Leu	Ser	
123		530					535					540					
125	Ile	Ala	Glu	Ile	Ser	Asn	Thr	Leu	Phe	Gly	Glu	Phe	Arg	Ile	Val	Pro	
126	545					550				555					560		
128	Leu	Leu	Val	Glu	Ile	Leu	Lys	Asn	Asp	Gly	Val	Arg	Glu	Ala	Arg	Ser	
129				565					570						575		
131	Gly																

VERIFICATION SUMMARY

DATE: 01/04/2002

PATENT APPLICATION: US/09/915,515A

TIME: 15:10:07

Input Set : A:\seq.txt

Output Set: N:\CRF3\01042002\I915515A.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date